

THE  
THOMSON-HOUSTON ELECTRIC COMPANY,  
PROPRIETORS OF THE  
THOMSON-HOUSTON  
ELECTRIC LIGHTING SYSTEM,

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PRINCIPAL OFFICE,

No. 131 DEVONSHIRE STREET,

BOSTON, MASS.

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FACTORY AT LYNN, MASS.



THE  
THOMSON-HOUSTON  
ELECTRIC COMPANY,

PROPRIETORS OF THE

THOMSON-HOUSTON SYSTEM

— OF —

ELECTRIC LIGHTING.

MANUFACTURERS OF

Dynamo-Electric Machines, Electric Motors, Electric  
Arc Lamps, Incandescent Lamps, Current Regu-  
lators, Current Distributors, Lightning  
Arresters, Cut-Outs, Switch-Boards,  
Etc., Etc.

~~~~~  
— DEALERS IN —

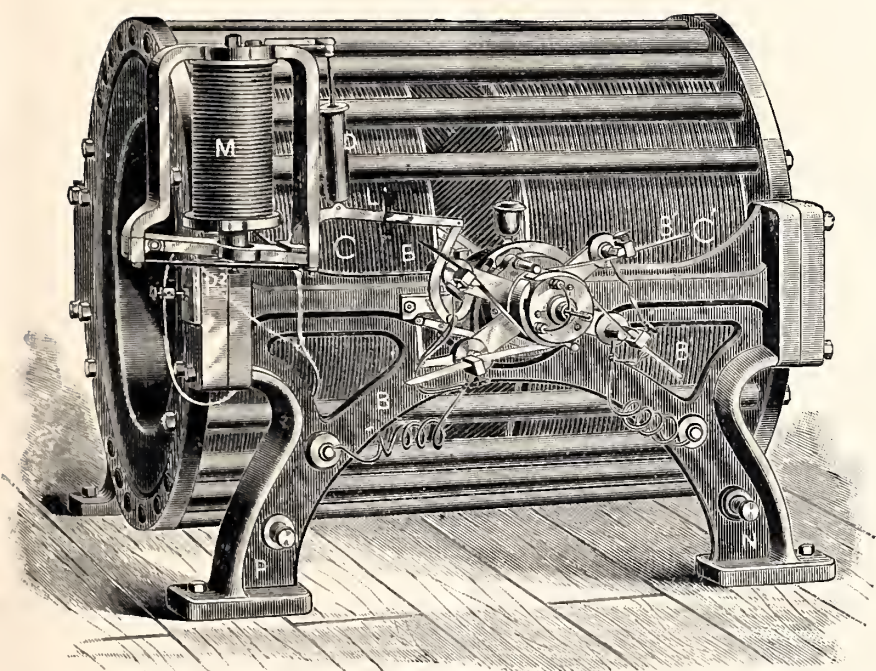
ELECTRICAL APPARATUS  
GENERALLY.

—  
PRINCIPAL BUSINESS OFFICE :

131 DEVONSHIRE STREET,  
BOSTON, MASS.

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Dynamo-Electric Machine, with Thomson's Spherical Armature.



*OFFICERS.*

H. A. PEVEAR, PRESIDENT.

C. A. COFFIN, VICE-PRESIDENT.

S. A. BARTON, TREAS. AND MANAGER.

E. I. GARFIELD, SECRETARY.

ELIHU THOMSON, ELECTRICIAN.

E. J. HOUSTON, CONSULTING ELECTRICIAN.



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## INTRODUCTORY.

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The Thomson-Houston system which is now exciting so much interest and favorable comment in Europe, has been in operation in various cities of the United States for the past three years.

The rapid development which it has achieved in this short time, having been adopted in nearly one hundred cities and towns in the United States, has placed it far in advance of its competitors, and has won for it the reputation of being the most simple, economical, and commercially valuable system of electric lighting in the market.

The apparatus of the Thomson-Houston Electric Company possesses advantages of an important character over all others.

The dynamo machine is strictly automatic in character, admitting of any number of lights being turned off simultaneously without injury to the machines or remaining lamps, or without the introduction of resistance, and with a corresponding reduction of power. To illustrate: if there should be forty-five lights in use on a circuit and forty of them should be turned off simultaneously, the dynamo would be perfectly controlled by the automatic regulator, without any attention on the part of an engineer or other person in charge, so that the remaining lamps would receive only their proportion of electric current, and the power reduced to that sufficient to run them. This is a feature which is possessed by no other company in the world.

By an ingenious and simple attachment, a constant and strong current of air is forced upon the surface of the commutator directly in the path of the brushes, so that the heating and sparking which is so troublesome and dangerous in other machines is entirely overcome, allowing a free use of oil on the commutator, and thereby reducing the wear and tear to a minimum. This is an advantage possessed by the Thomson-Houston system alone.

One of the principal items in the expense of operating an electric light plant is the outlay for repairs on apparatus, through the burning out of armatures, and wearing of commutators, brushes, etc. This has been so skilfully provided against in the construction of the Thomson-Houston apparatus, that the annual charge for depreciation and repairs on a plant of this system is reduced to a point far below that sustained in the operation of any other in use, and makes it possible to do a profitable business in supplying lights from a central station under circumstances that

with any other known system would result in a loss. This has been so fully proven, that in many prominent cities in the United States entire plants of other systems have been thrown out bodily and Thomson-Houston plants installed in their place, a sufficient saving being effected thereby to place the companies which had before been conducting their business at a loss, upon a paying basis.

It has been fully demonstrated in various parts of the United States that in any one of three essential particulars, there can be effected a saving as compared with any other system, in an amount sufficient to pay the interest on the entire cost of the apparatus. First, in the matter of wear and tear and depreciation. Second, in the economy of power consumed, because of the automatic regulation. Third, in the cost of attendance resulting from the automatic features of the apparatus and its great simplicity of construction. All of which constitute elements absolutely necessary to secure a profitable and successful business in all places and under all circumstances.

The Thomson-Houston incandescent system of lighting possesses equally superior advantages. Its dynamo for direct low tension incandescent lighting possesses very superior features of simplicity and economy, and carries a greater number of lights in proportion to its weight than any other made. During the past few months the company has introduced a method for running incandescent lights on the same circuit with arc lights, and in such a manner that each incandescent light is entirely independent of the others, and can be extinguished or lighted at pleasure. This is also a special feature possessed by no other company.

Because of the remarkable simplicity and economical features of the Thomson-Houston system, it is especially adapted for use in countries remote from the source of supplies of electrical apparatus. So fully has this been recognized that in all cases where there has been an intelligent investigation into the merits of the different systems for export trade during the past two years, the Thomson-Houston has been selected as offering the best facilities for establishing a profitable business. This company is rapidly pushing the introduction of its apparatus into various foreign countries and cities.

## DESCRIPTION OF APPARATUS MANUFACTURED BY THE THOMSON-HOUSTON ELECTRIC CO.

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The **DYNAMO-MACHINE** of the present system, embodies joint improvements patented by Elihu Thomson and Edwin J. Houston, and improvements patented by Elihu Thomson. We call especial attention to the following merits:—

1st. Extreme simplicity, there being only three coils of wire on the revolving portion, or armature, and three pieces of copper in the commutator.

2d. The complete enclosure of the armature by the coils and magnets of the machine, concentrating the power where it should be applied to produce the best results, and preventing injury to the moving parts, or danger to the machine from iron objects being drawn into it.

3d. The highest efficiency, due to the enclosure of all the wire of the armature where the electricity is generated, by a most powerful magnetic field, giving great saving in horse-power to produce a given result.

4th. The spherical form and small size of the revolving portion or armature, giving the least possible air-resistance, or loss of power by fanning air.

5th. The form and size of the armature, preventing the possibility of injury due to centrifugal force.

6th. The compact and encased condition of the parts, such as insulated wire, rendering them not subject to injury by contact with surrounding objects.

7th. The continuous character of the current and its consequent advantages.

8th. The machine possesses the simplest commutator in the world giving continuous currents; and from its construction there is no danger of injury to its insulation, so often the cause of putting the generators of other systems out of service. With the air-blast attachment oil may be freely used on the commutator, and the wear of its segments and of the brushes then amounts to almost nothing.

9th. The generator requires less attention to keep in order than any other, and with the automatic regulator attached its power is adapted to the number of lights it is desired to maintain.

10th. There is little noise or hum produced during running, so often an objectionable feature of other generators.

11th. The wearing in the boxes is reduced to a minimum by the lightness and balance of the revolving parts.

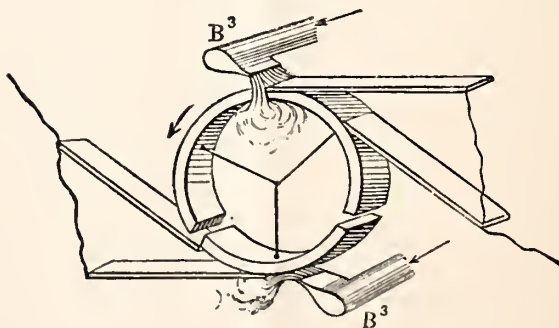
12th. The thoroughness of insulation of all its parts, where needed.

13th. The replaceability and interchangeability of its important parts.

14th. The freedom from risk of short circuits; the potentials being so distributed as to secure this result.

### *THE AIR-BLAST SPARK-CONTROLLER.*

By an invention of the greatest value, protected by bottom patents, Prof. Thomson has provided a complete solution of the problem of controlling the sparking or flashing liable to be so troublesome at the commutators of all dynamo-machines. This invention consists in forcing a thin and forcible jet of air square against the ends of the brushes where they bear on the commutator segments. With this attachment there is no difficulty in taking off from a single narrow commutator a high potential current for sixty or more lights in one circuit, and its use permits oil to be applied with great freedom to the commutator, thus almost completely **doing away with the wearing out** of the brushes and commutator. With this improvement on a machine the brushes have been known to endure nearly three months' use without trimming.



## ELECTRIC ARC LAMPS.

---

The following styles and patterns of arc lamps, each adapted to particular uses or locations, are provided. They are covered by patents of Elihu Thomson, assigned to the Thomson-Houston Electric Co. :

**THE THOMSON STANDARD LAMP**, for factories, mills, foundries, depots, freight-yards, streets, etc., etc.

**THE STANDARD DOUBLE LAMP**, for all-night use.

The **steady** and **quiet** burning of the Thomson Arc Lamps — a fact at present well recognized — renders their use practicable and advantageous, on the score of beauty and economy, in theatres and concert halls, where they have been frequently applied with the most satisfactory results.

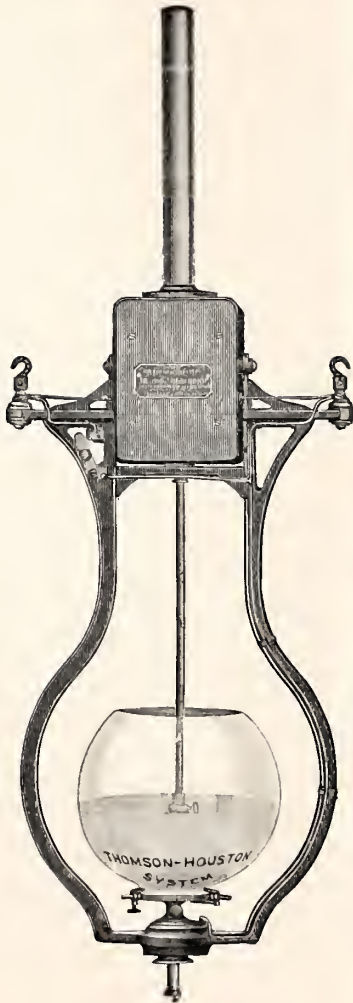
The **THOMSON DIVIDED ARC LAMP** marks a great advance in arc lighting. It supplies a light of moderate candle-power, for locations where a 2000-candle power lamp gives more light than can be economically utilized. This divided arc lamp is especially suited for factory and mill use, where looms and other tall machines are liable to be so closely placed as to make a comparatively large number of lamps advantageous for avoiding shadows. Nearly twice as many of these lamps can be supplied by a given expenditure of power and dynamo capacity as of the standard lamps.

The **THOMSON FOCUSsing LAMP**, shown in the cut, contains several features peculiar to it, by which it is admirably adapted for maintaining the **arc** or **light focus** constant in position during burning. **Headlights for steamers, and search lamps**, consisting of our focussing lamps and proper reflectors and attachments which we provide, are in constant demand. They are substantial and reliable.

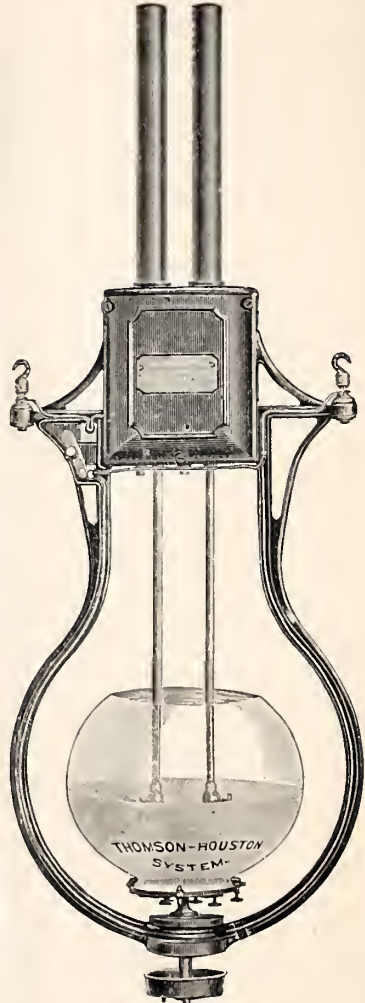
The lamps above described are furnished with all appliances desirable for safety or convenience, such as switches, automatic safety devices, etc. Their reliability and constancy are owing to their being without clock-work, and without dash-pots with liquids in them, as also to the care and study of details given to the requirements of a practically perfect arc light. They are automatically extinguished when the carbons are sufficiently consumed. They are self-adjusting in all respects, not requiring expert attention.

These lamps are of plain, yet neat and substantial design, and do not need readjustment after leaving the factory.

Lamps, when used in situations where they are liable to be exposed to the weather, are provided with protecting hoods above them.



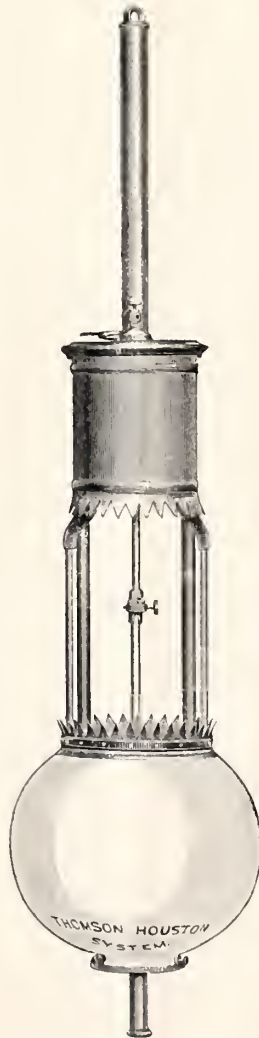
STANDARD LAMP.



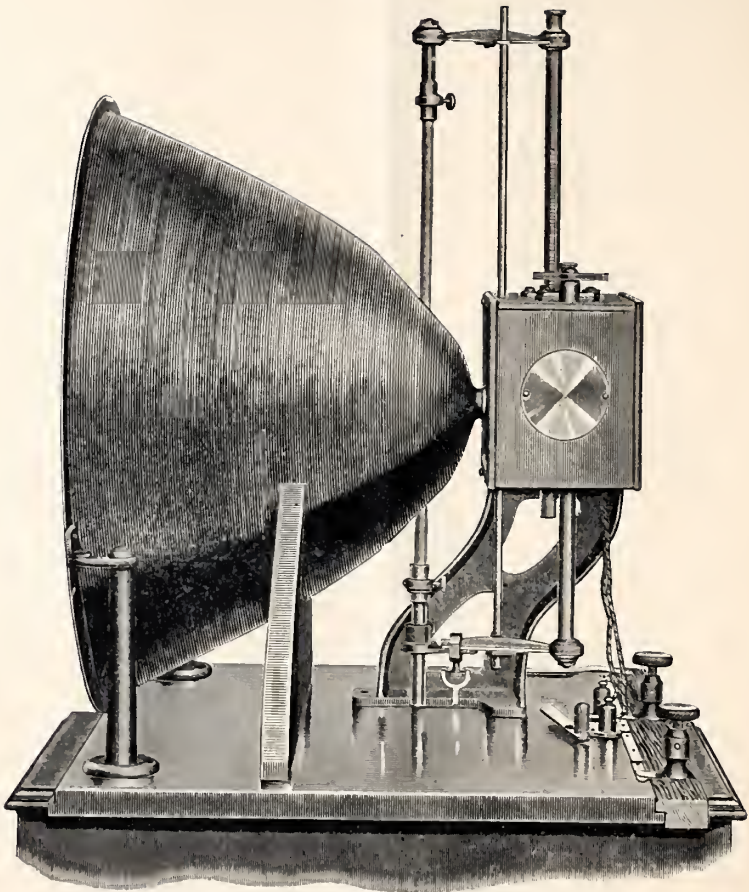
DOUBLE LAMP.



**THE ORNAMENTAL LAMP**, illustrated, makes a handsome source of light for offices, fine stores, dining-halls, lecture-halls, churches, etc. These are furnished double as well as single.



ORNAMENTAL LAMP.



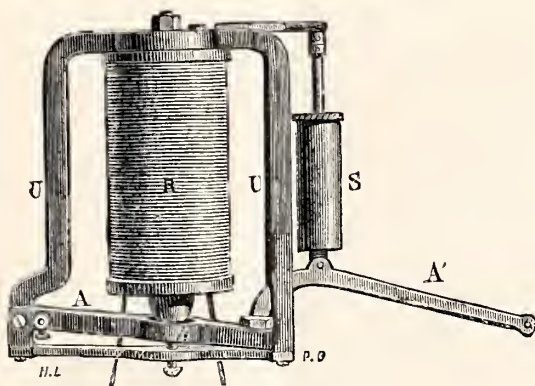
FOCUSsing LAMP.

### *THE AUTOMATIC CURRENT REGULATOR.*

**THE AUTOMATIC REGULATOR** is an attachment of simple construction which is secured to the machine and **adjusts the current** to a standard amount, regardless of the number of lamps being at any time used. It serves also to **compensate for changes in the speed of the generator** due to unsteady power, so that the lights may be retained steady and of normal size, even though the motive power does

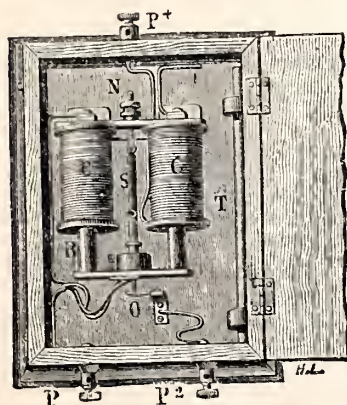


not furnish a constant speed. It serves further to so **adjust the commutator of the machine**, that any injury due to faulty adjustments made by unskilled attendants, is completely obviated. It is especially valuable as a safeguard to the machine and lamps in case of any accident



AUTOMATIC REGULATOR.

to the wires or short circuiting of the machine, and adds much to the security against fire. By its use the lines are supplied with a standard current, and lights may be interchanged from circuit to circuit without readjustment.

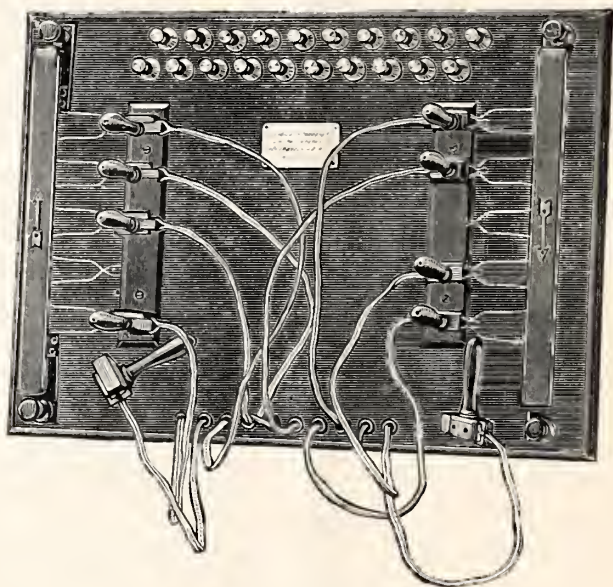


CONTROLLER-MAGNET.

The current regulator consists essentially of a delicate contact controlling magnet placed in the line or main circuit, governing the action of a second electro-magnet which moves the commutator brushes to positions of practically constant current. The operation is very simple, without complexity or uncertainty. In these respects it is unlike similar devices appearing in other systems, at recent dates, notwithstanding that such regulators are covered by the Thomson-Houston Patents.

### THOMSON PATENT DISTRIBUTION SWITCH.

This valuable appliance enables the lights in a mill to be controlled from a central point so as to allow groups of lights to be extinguished



DISTRIBUTION SWITCH.

and relighted at will, or exchanged from the circuit of one generator to that of another, without disturbing the circuit wires. The switch is placed near the generators, and is conveniently given in charge of the attendant. Should the basement of a mill require to be lighted at an earlier hour than other portions of the mill, the attendant adjusts his switch accordingly, and may add the other lights at any subsequent time. In like manner should it be desired to extinguish a group of lights in a certain room at any given hour, the attendant can do so at his switch without inconvenience. Many applications under varied conditions will suggest themselves. The current is **absolutely cut off** from the lights, and line-wire thrown out of use by the use of the switch. On street circuits, worked by lighting companies, it is modified to enable lights in any building to be absolutely cut-off, so that the unused wires are "dead" wires for the time being, thus completely fulfilling the re-

quirements of the board of underwriters. The advantages of the switch have been fully tested by long practical use. This switch is also constructed, when needed, to admit of the **sudden transfer** of a circuit of lights, more or less in number, from the circuit of one machine or set of machines to another circuit of machines and lamps while running, and without disturbing the operation or even momentarily extinguishing any of the lamps.

We also are prepared to supply several approved designs of central station switch-boards of 50, 100, 150, and 200 lights capacity, or over.

**LIGHTNING ARRESTERS.** For local lighting companies, protection is sometimes necessary against danger from lightning. Such protection is afforded in a novel way by Thomson's new **Lightning Arrester**, a simple and effective device.

**CUT-OUTS.** We make an improved and simple form of cut-out for use at points where line-wires enter buildings. This cut-out works without spark, and with perfect safety while its insulating surfaces are ample in extent.

**GALVANOMETERS.** We also make galvanometers for the use of local companies and experts in measuring and testing the current from dynamo machines.

**THE THOMSON-RICE INVARIABLE AMMETER** is a very useful instrument for standardizing currents, regulators, etc. Depending not upon terrestrial magnetism, or that of so-called permanent magnets, but solely upon the relative magnetic powers of two electro-magnetic coils, its indicators may be relied upon at all times.

**LINE WIRE, CARBONS, HANGING BOARDS, HOODS, INSULATORS, etc.** The Thomson-Houston Electric Co. is prepared to supply local companies, and private consumers, with all kinds of electrical supplies used in the installation and maintenance of electric lighting plants.

**HAND DYNAMO.** Physicists and lecturers in many departments of science, will welcome the appearance of a hand dynamo suitable for the laboratory and capable of working a small arc light, or several incandescent lamps, or producing other effects often required in practical work or lectures. The machine is of very great power for its size and speed of running. It is also an admirable electric motor, and has delivered over one horse power.

**ELECTRIC MOTORS.** The electric transmission of power has for a long time been regarded by the foremost practical electricians as perfectly feasible. As a means of distributing motive power, the electric motor seems destined soon to come into extensive use. The results thus far obtained give promise of great success in the future. The Thomson-Houston Electric Co. is provided with ample facilities for building motors of various sizes to run economically upon arc-light or other circuits.

**ARC LAMPS IN MULTIPLE SERIES.** It is believed that this is the first time arc lights running in multiple series have ever been used in public. Prof. Thomson's discovery and invention for making this great desideratum an accomplished fact illustrates his genius as an electrician. By the use of this apparatus arc lights of totally different powers may be run from a single circuit, some in series, and some in multiple arc or in multiple series. Divisions and re-divisions, as well as reunions of arc circuits, are easily practicable.

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## INSURANCE.

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The Thomson-Houston system of electric lighting has been examined by the agents of insurance companies and pronounced perfectly satisfactory in fulfilling all the requirements laid down by them, and all lines and apparatus put up by the Thomson-Houston Electric Company conform to insurance rules. The safeguards provided by this company in the way of automatic regulation of the current to meet every demand, cannot be equalled by any other company.

All our apparatus has stood the test of continued daily practical use, and it is built and tested under highly skilled superintendence.

## SUMMARY OF WELL-KNOWN FACTS CONCERN- ING THE THOMSON-HOUSTON SYSTEM.

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The Thomson-Houston system is automatic and self-regulating. These highly essential and valuable features are possessed by **no other Company in existence.**

Its lights can be turned on or off at will and without attention to the dynamo, thus effecting a corresponding saving of power. **This is not possible with any other system.**

The Thomson-Houston system has in *every case* where it has exhibited in competition with others, received the **FIRST PRIZE** for every valuable feature. **This cannot be said of any other Company in the world.**

At the great Industrial Exposition at Cincinnati, in the autumn of 1883, it received the **FIRST PRIZE** for best system of arc lighting. At the great exhibition held at Louisville, the same year, it received the **FIRST MEDAL** for **BEST ARC LIGHT**. At the exhibition held at San Francisco in the summer of 1884, it received the **FIRST GOLD MEDAL**. At the most exhaustive competitive test of the various prominent systems ever made by a city, given at Quincy, Ill., its merits *were fully recognized by a combined committee of merchants, mechanics, and experts.* The result was the award to it of the contract for lighting the city. At the great International Electrical Exhibition at Philadelphia (at which no awards were made), in October, 1884, its lights were pronounced by the "*American Gas Light Journal*," *a natural enemy of electric lighting in general*, to **BE THE FINEST AND STEADIEST OF ALL THE SYSTEMS EXHIBITED.**

In a letter from Prof. Thurston, of Hoboken, to the Armington & Sims Engine Co., reporting his tests of power required in running Thomson-Houston standard arc lights, he stated that with sixty lights running from two dynamos, the power was but 7-10 horse-power per light of 2,000 C. P. each.

From a direct comparison of the Thomson-Houston with other apparatus at the Cincinnati Exposition of 1883, as to the average light in all directions measured, and the relative illuminating power per unit of energy, the jury stated that "**there is a difference of more than forty per cent. in favor of the Thomson-Houston.**" [See Science, Vol. III., No. 54, p. 184.]



At no city in the United States has it ever competed for city business that it has not been awarded the city contract. **This cannot be said of any other Company in the United States.**

In many cities in various parts of the United States, particulars concerning which can be had by application, *entire plants of other systems* have been thrown out and the Thomson-Houston installed in their place, thus fully corroborating what is claimed for it, viz.: that it is cheaper to PURCHASE Thomson-Houston lamps and dynamos than to operate any other system AS A GIFT.

The Thomson-Houston Electric Company, during the past year, has installed *by far* a greater number of local company plants, in different parts of the United States, THAN ALL OTHER ELECTRIC LIGHTING COMPANIES COMBINED. In proof of which, attention is called to the accompanying list of local companies operating its system, nearly all of which have been organized *within the past eighteen months*.

For testimony with reference to the extraordinary merits of this system, we are permitted to refer to such eminent and trustworthy authorities as Prof. Sylvanus Thompson, of England; Rowland R. Hazard, Esq., president of the Gramme Electric Company, of New York; the Electrical Review, of New York; the Electrical World, of New York, or to any of the local companies using its system, and especially to those that have been the longest operating it, such as the Kaysmouth Electric Light Company, of Kansas City, Mo., operating nearly 300 lights; the Thomson-Houston Electric Light Company, of St. Louis, operating 300 lights; the Merchants' Electric Light and Power Company, of Boston, operating 600 lights; the Syracuse Electric Light Company, operating 250 lights; the New Haven Electric Company, 200 lights; the Worcester Electric Light Company, 250 lights; and the Pacific Thomson-Houston Electric Light Company, 150 lights.

## THE INCANDESCENT DISTRIBUTING SYSTEM.

### INCANDESCENT LIGHTS IN ARC CIRCUITS.

We have developed and are introducing a system of Incandescent Electric Lighting by which incandescent lights can be successfully and economically run from the same circuit with arc lights. Hitherto a possibility that the breakage of one or two incandescent lamps of a group might result in a further breakage and disruption of an entire circuit has prevented Lighting Companies from a general use of any such method, although some attempts have been made. Our new improvements provide perfect safeguards against any trouble from accidental breakage of a lamp or other unforeseen cause. By an automatic device in the arc light current a group of eight incandescent lights, of twelve to sixteen candle power each, can be substituted in place of one arc light. All the lights

in any group can be used at once, or any desired number of them can be extinguished at pleasure as easily as gas lights. The device acts by electrical means, being entirely independent of clock-work, and hence affords no chance for a careless attendant to produce disaster by neglecting to wind up a mechanism. We speak of a *group* of lights, but it should be understood that the lights of the group can be scattered about at pleasure, and may be in various rooms if desired. It is also possible to have a different number of incandescents in place of one arc light, by adapting the number to the candle power required in each lamp. Any number of groups of incandescent lights within the power of a machine can be used on one main circuit, or a part of these groups can be replaced by arc lights.

The transfer device, by which the current is distributed to a group of incandescent lights, is contained in a neat box that can be placed at any convenient part of the circuit, and is known as the Thomson-Rice Incandescent Distributor, from its inventors, who have designed it with a view to fulfilling all conditions of effectiveness and safety.

In this connection we publish the following letters:—

[ COPY.]

PROVIDENCE, R. I., June 25, 1885.

V. A. THOMAS, Sup't Narragansett Electric Light Co.

Dear Sir:—The incandescent lights of the Thomson-Houston system, as run from distributing boxes, which were placed in our store some time since, has given, it affords us pleasure to say, the utmost satisfaction since their being started. It is our opinion that the lights are fully equal to the best incandescents we have ever seen. They seem to exactly fill the want for a good incandescent system which can be operated at a long distance from the central station.

Yours truly,

(Signed)

JAMES, KENNEDY & CO.

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BOSTON, July 1st, 1885.

THOMSON-HOUSTON ELECTRIC CO.

Gentlemen:—In answer to your inquiry, we desire to say that the plant of arc and incandescent combined of the Thomson-Houston system supplied to our station and yards by the Merchants' Electric Light & Power Company, using your system of electric lighting in Boston, have given admirable satisfaction since they started and appear to us to be just what is wanted for a combined system of arc and incandescent. We can most heartily recommend them to all inquiries for a thoroughly satisfactory system of incandescent lighting.

Very sincerely yours,

(Signed)

J. R. KENDRICK, Gen'l Manager Old Colony R. R.

## ESTIMATED DAILY EXPENSE

OF OPERATING INSTALLATIONS OF NINETY, ONE HUNDRED AND EIGHTY,  
TWO HUNDRED AND SEVENTY, AND THREE HUNDRED  
AND SIXTY ARC LIGHT PLANTS,

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These estimates of daily running expenses are based upon the supposition that the lights are to be supplied an average of eight hours per night; in cases where they are furnished for a shorter time, a saving in the consumption of carbons and fuel would be effected. We omit the item of rent from the operating expenses because of the variation in prices which exists in different cities; it can very easily be added, however, according to the amount charged. Wherever available water power can be obtained the profits of the enterprise can be increased to the extent of the cost of fuel which would otherwise be used.

### COST OF OPERATING A 90 ARC LIGHT PLANT PER DAY.

|                                           |                                                          |
|-------------------------------------------|----------------------------------------------------------|
| Manager . . . . .                         | \$3 00                                                   |
| Clerk . . . . .                           | 1 50                                                     |
| Engineer . . . . .                        | 2 00                                                     |
| Three Assistants . . . . .                | 3 00                                                     |
| Carbons . . . . .                         | 4 00                                                     |
| Fuel (estimated) . . . . .                | 5 40                                                     |
| Taxes, Insurance, and Telephone . . . . . | 80                                                       |
| Depreciation and Repairs . . . . .        | 1 50                                                     |
|                                           | <hr style="width: 10%; margin-left: 0;"/> \$21 20 = £4-5 |

### COST OF OPERATING A 180 ARC LIGHT PLANT PER DAY.

|                                           |                                                            |
|-------------------------------------------|------------------------------------------------------------|
| Manager . . . . .                         | \$3 50                                                     |
| Clerk . . . . .                           | 2 00                                                       |
| Engineer and Fireman . . . . .            | 3 00                                                       |
| Five Assistants . . . . .                 | 5 00                                                       |
| Carbons . . . . .                         | 8 00                                                       |
| Fuel (estimated) . . . . .                | 10 80                                                      |
| Taxes, Insurance, and Telephone . . . . . | 1 50                                                       |
| Depreciation and Repairs . . . . .        | 3 00                                                       |
|                                           | <hr style="width: 10%; margin-left: 0;"/> \$36 80 = £7-7-6 |



## COST OF OPERATING A 270 ARC LIGHT PLANT PER DAY.

|                                           |        |                         |
|-------------------------------------------|--------|-------------------------|
| Manager . . . . .                         | \$4 00 |                         |
| Clerk . . . . .                           | 2 00   |                         |
| Engineer and Two Firemen . . . . .        | 4 00   |                         |
| Seven Assistants . . . . .                | 7 00   |                         |
| Carbous . . . . .                         | 12 00  |                         |
| Fuel (estimated) . . . . .                | 16 20  |                         |
| Taxes, Insurance, and Telephone . . . . . | 2 20   |                         |
| Depreciation and Repairs . . . . .        | 4 50   |                         |
|                                           |        | ———— \$51 90 = £10-7-11 |

## COST OF OPERATING A 360 ARC LIGHT PLANT PER DAY.

|                                           |        |                         |
|-------------------------------------------|--------|-------------------------|
| Manager . . . . .                         | \$5 00 |                         |
| Clerk . . . . .                           | 2 50   |                         |
| Engineer . . . . .                        | 3 00   |                         |
| Two Firemen . . . . .                     | 2 00   |                         |
| Eight Assistants . . . . .                | 8 00   |                         |
| Carbous . . . . .                         | 16 00  |                         |
| Fuel (estimated) . . . . .                | 21 60  |                         |
| Taxes, Insurance, and Telephone . . . . . | 2 80   |                         |
| Depreciation and Repairs . . . . .        | 6 00   |                         |
|                                           |        | ———— \$66 90 = £13-7-11 |

## TESTIMONIALS FROM LOCAL COMPANIES AND INDIVIDUALS USING THOMSON-HOUS- TON APPARATUS.

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Mr. William Widlund, to whom many of the following communications are addressed, having been granted by the Peruvian Government the exclusive right of introducing electric lights into the eight principal cities of that country, for a period of twenty years, came to the United States with a view of thoroughly investigating the various systems of lighting here. After five months spent in visiting different cities, and making an exhaustive investigation of other systems, he was forced to the conclusion that the Thomson-Houston light was superior to any in the market, and consequently the proper one for him to adopt. Acting upon this decision, Mr. Widlund immediately entered into arrangements with us to furnish all the electric lights for Peru for the full period of twenty years.

These letters are confined strictly to facts, and being an unbiased expression of opinion on the part of those using our lights, are the best evidence that can be offered respecting the reputation and standing of the Thomson-Houston system.

SYRACUSE ELECTRIC LIGHT AND POWER CO.

SYRACUSE, N. Y., March 26, 1885.

*Mr. William Widlund.*

Dear Sir: Yours of the 24th inst. is at hand, and would say in reply that we are so well pleased with the operation and many points of commercial advantage connected with the Thomson-Houston system, that we take pleasure in answering your inquiries at length, hoping we may save you the trouble of unsatisfactory and expensive experiment.

We have tried in Syracuse most of the systems of electric lighting now in use in the United States, including the "Brush," "Fuller," "Parker," or "Remington," "Sperry," etc., none of which gave satisfactory results either commercially or as regards steadiness and purity of light.

The Thomson-Houston was introduced here at a period when everybody had become disgusted with the flickering and failures of electric lights, and at once began to grow in public favor until their strongest competitor, the Brush-Swan Company, *finally withdrew*.

We have now a contract for lighting the city for three years, which was awarded us at higher prices than our competitors, after a thorough investigation of systems in use in other cities. In regard to this matter

I should like to have you write to Mayor Thomas Ryan, who made very thorough work of the investigation.

As to the satisfaction it gives our mercantile customers, we have many who depend upon us entirely for light, and use no other illuminant, at the same time paying us from twenty to thirty per cent. more than they formerly paid for gas, though of course they get much more and a better light. These, together with our city lights, yield a large net income, which we are putting into additional plant of the Thomson-Houston system, which is, perhaps, as good evidence as can be given of our confidence in the system.

In regard to economy of running expense, we are satisfied that no system can be properly run with less attendance or power, or so little repairs or danger of accidental interruption of the lights.

If time will permit, you might communicate with our vice-president, Mr. Butler, who lost money on the "Fuller" system, or Mr. W. K. Pierce, who is well acquainted with the "Brush" scheme.

If there is any further information you desire which is in our power to give, we shall be pleased to assist you.

Yours respectfully,

F. H. LEONARD, Manager.

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KANSAS CITY ELECTRIC LIGHT COMPANY,  
KANSAS CITY, MO., March 30, 1885.

*Wm. Widlund, Boston, Mass.*

Dear Sir: Your favor dated March 25th, 1885, is received, and it affords us much gratification to be able to speak in high commendation of the Thomson-Houston system.

We have been operating their apparatus for three years, and have thoroughly tested its efficiency, and have had much opportunity and occasion to compare it with other systems, and we are satisfied it is the best arc-light system in this country.

The light gives universal satisfaction to our patrons. The machinery is efficient and reliable, and the most economical to operate of any of which we have knowledge. Our service in June was 55,800 hours, and cost in production, for steam power, dynamos, and lamps, .02588 cents per hour, *i. e.*, per lamp per hour.

The Thomson-Houston Company is energetic and progressive, and while they have the best arc-light system in the market, they are constantly improving and developing it in such directions as tend to reduce operating expenses and promote efficiency and economy.

We have always found the gentlemen who manage the business of the company honorable and generous in their dealings, and ever ready to assist us in extending our business, and we can cordially commend them to your confidence.

Should there be any special inquiry which you might desire to make, it will afford us pleasure to answer any questions you may ask.

Of course we naturally feel a pride in the system of our adoption, and an interest in its extension and reputation; and while we have this patriotic vanity, we also feel secure in our warmest recommendation of the Thomson-Houston system. It will bear the closest comparison with any other system, and vindicate its superiority every time.

I trust this will reach you, and beg to subscribe myself, in behalf of the Kansas City Electric Light Company,

Your humble servant,

I. W. PHILLIPS.

THE NEW HAVEN ELECTRIC LIGHT COMPANY,  
NEW HAVEN, CT., March 27, 1885.

To Mr. William Widlund, Boston, Mass.

Dear Sir: Yours of the 24th is just received. We are now using the Thomson-Houston system for street lighting, also for commercial lights.

We can say that it is simply perfect. We formerly used the United States, or the New England Weston system, which after a trial of one and a half years, we discarded, as it was a poor light, very unsteady, expensive to run, and there was so much wear and tear, that it wrecked our company.

Those of us who had some faith in electric lighting, formed a new company, using the Thomson-Houston Co.'s system.

We started our lights Dec. 1st, 1883, and have earned *over sixteen per cent. net per year* on our capital.

I can also say that before we took hold of this system, I personally examined every system in the country, going into every State east of the Mississippi river on a pleasure trip, and whenever I remained over night in a city where electric lights were used, I spent my evenings in their stations getting all the information possible in regard to cost of running, etc.

I found the actual cost to produce lights with the Thomson-Houston system was about 25 per cent. less than by any other, and the lights were much better.

We think it is perfection, as do all our customers.

It is the only system which I have seen where the lights burn without a flicker.

Should your business bring you this way, I would very much like to have you call; we will gladly give you all our experience and will show you a nice station.

Very truly yours,

F. A. GILBERT, Pres.

MUNICIPAL ELECTRIC LIGHT CO.  
Executive Offices, 104 BROADWAY,  
BROOKLYN, N. Y., March 26th, 1885.

*William Widlund, Esq., Boston, Mass.*

Dear Sir: In reply to yours of the 24th inst. in reference to our company using the Thomson-Houston electric system, and with what results, would say that the system was selected by our company after having spent much time and money investigating the various lights brought to our notice, and we can cordially and frankly say that we have never had cause to regret such selection, for in the matter of steadiness of light, economical and satisfactory working order of dynamo, lamps, and the marvelous certainty of the Automatic Regulator, we think that no light yet presented to the public can compare with it. We have been running one hundred and forty lights from an old-style Armstrong engine, which is used every day furnishing power to a large factory, and have only lost twenty minutes in six months run; said delay was caused by a fire in said factory.

We are now building a new station, sixty by one hundred feet, with five engines and facilities for six hundred lights, and shall most certainly give the order to the Thomson-Houston Electric Co. for all electrical apparatus needed to complete the same.

You will find that it will *cost you less to run their system than any other in the market*, and that the saving in the point of attendance and power used, and repairs in lamps and dynamos, would amount to a very large interest on the entire cost of plant. The Thomson-Houston Electric Company and their people were entire strangers to us when we were investigating the matter of choice of systems, but have found them to be as good as their system, which is saying a great deal, when we are of the opinion that it is the best in the world. If you are in the neighborhood of our city, would be pleased to have you examine the station, &c.

Respectfully,

CHARLES COOPER, President.

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ST. JOSEPH ELECTRIC LIGHT CO.  
ST. JOSEPH MO, March 2, 1885.

*Wm. Widlund, Boston, Mass.*

Dear sir: Replying to your favor of Feb. 26th, will say that we are using the Thomson-Houston system of electric lighting, which I think cannot be equalled by any other system in the country. There are some features in this system which make it "par excellence" over any other system within my knowledge. The horse-power consumed per light being very low, about  $\frac{2}{3}$  horse-power for 2,000 candle-power lamps, and about  $\frac{5}{100}$  for the divided arc. The automatic regulation is a feature that can hardly be estimated in dollars and cents. It thoroughly and completely protects the machines and lamps from accidents by a short

circuit. Any number of lamps may be turned on or off without any attention whatever being given the machine by the attendant. As lamps are turned off, the motive power consumed is correspondingly reduced. It is my experience that the lights give more universal satisfaction to subscribers than any other system with which I am acquainted. They burn perfectly noiseless and are no trouble to keep in repair.

This company *earned five per cent. quarterly* last year. Three of these dividends were paid in cash to the stockholders. The last one, payable January 1st, was set aside. You will observe that we earned twenty per cent last year, fifteen of which was paid in cash.

Yours very respectfully,

W. C. STEWART, Supt.

AMERICAN ELECTRIC AND ILLUMINATING COMPANY,  
197 CONGRESS STREET,

BOSTON, April 1st, 1885.

*William Willard, Esq., care of Matthew Crosby, 92 State St., Boston.*

Dear Sir: In answer to your inquiry of the 25th ult., addressed to the Merchants' E. L. & P. Co., regarding the Thomson-Houston system, would say: We send you by to-day's mail a copy of illustrated pamphlet, which will give you our views on the subject.

Yours truly,

AMERICAN E. & I. Co.,

per S. E.

The following are extracts from the pamphlet referred to in the foregoing letter:—

"The company, although organized in June, 1882, did not really get to work until early in the following winter. It obtained from the Thomson-Houston Electric Company a lease or license to operate the Thomson-Houston system in the city of Boston. It was the hope and ambition at the time to establish a lighting system in the city of Boston, and in time to share the business of the city with the Brush and Weston companies, already established.

"The excellence of the light, its pure white color, its steadiness and comparative economy of production, began to attract very general public attention, and applications were received from several New England cities asking the company to establish and operate plants therein. Of the various systems of electric lighting which have striven for public favor, it is our proud boast to say that the American system, based on the Thomson-Houston inventions, has proved itself to be not only the best but the most economical method of producing and supplying the electric light. In lighting, as in all other things, the public want to get the best and the most for their money, and they are keen enough and shrewd enough to know when these conditions are best fulfilled by any electric lighting system. The gratifying progress of the American system, therefore, is not only an indication of its superiority over the other systems in use, but it shows that it is also the most economical. Our success has been the success of competition. It has not been lightly won. By the new system of incandescent lighting devised by Prof. Elihu Thomson, by which the



same electric current can be made to operate both arc and incandescent lamps, the American system can light not only streets, halls, stores, factories, and large spaces, but the incandescent lamps can be carried at the same time into every place where gas or kerosene is now the illuminant.'

This company are now running 498 arc lights from their central station, and during the past year have displaced 132 Weston and 45 Brush lights.

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THE HARTFORD ELECTRIC LIGHT CO.

HARTFORD, CONN., Feb. 27, 1885.

*Wm. Widlund, Esq., Boston.*

Dear Sir: In reply to an inquiry made by Mr. Geo. Widlund, I will say that we have been using the Thomson-Houston system for about two years, and now consider it the most economical system for electric lighting extant

In regard to paying dividends I will say that we have expended several thousand dollars on construction account, and this has been paid largely from the receipts of the lights now running, and in the face of that we are able now to declare and have declared a quarterly dividend payable March 1.

In conclusion I will say that we consider it the best and most economical system in use.

Yours truly,

F. A. FRENCH, Supt.

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CITIZENS' ELECTRIC ILLUMINATING CO.

BROOKLYN, N. Y., March 24, 1885.

*Mr. Widlund, 98 State St., Boston,*

Dear Sir: Your letter of the 24th received, and in reply would beg to say that the Thomson-Houston system of lighting was introduced here through the efforts of Messrs. Pope, Sewell & Co., whose card we enclose. The members of this firm (one half owners of this company), are electrical men who have devoted their entire business life to electrical development, commencing as far back as 1861 as practical operators. I state this simply to show that it is reasonable to suppose the firm was fully competent to judge of the merits of the different systems.

This firm before introducing the Thomson-Houston system here, fully considered the various systems, and adopted the Thomson-Houston as preferable to all others both in matter of efficiency and economy. From our experience here and from the information we receive from various sources, we believe it to be the only system that gives a profitable return upon the investment, and that is wholly satisfactory to customers, and this is further evidenced by the fact that various cities and companies have thrown out at great loss other systems and adopted this in preference.

You can establish this fact by inquiry in New Haven, Hartford, and other cities. I can only speak favorably of the system.

Yours truly,

H. W. POPE, President.

OFFICE OF THOMSON-HOUSTON ELECTRIC LIGHT AND POWER CO.  
814 SIXTH ST., SACRAMENTO, CAL., April 6, 1885.

*Mr. William Widlund, Esq., Boston.*

Dear Sir : Yours of the 24th of March received, and I must say the Thomson-Houston system does all the company claimed for it when I was negotiating.

It cost considerable more for extras than I anticipated, but I am satisfied it costs the Brush people, with whom we are competing, quite as much and more for repairs, especially to armatures, as they have burned out several to our none.

We are paid about twice as much for our lights as the Brush Co., and in a year we have lost but one customer. It costs a little more to run than the estimate, but coal and labor are not so cheap here as in the East.

I spent two years time in investigating the various systems of lighting, and one year ago concluded the Thomson-Houston system to be the best. Our company purchased that system, and have not up to this time expressed a regret, and are fully satisfied we have the best and most practical at present used in the world.

Yours very truly,

F. H. WATERHOUSE.

WOONSOCKET ELECTRIC MACHINE AND POWER CO.  
WOONSOCKET, R. I., March 25, 1885.

*Wm. Widlund, Boston, Mass.*

Dear Sir : I received your letter of inquiry this morning and will endeavor to answer it, and I hope satisfactory to you. As you state, we "do use the Thomson-Houston system of arc lighting," and have used it for two years, and in the face of strong opposition (as the local gas company is composed of the most influential men of the town), we have built up such a strong feeling in favor of our lights that the town has contracted for some of them to light their streets. In regard to the system itself, as far as we are enabled to judge from experience, correspondence, etc., it is the very best one at present in use in this country, notably for quantity, quality, and steadiness of the light. Providence and Newport, the two largest cities of the State, have discarded their old systems and substituted the Thomson-Houston arc lamps, and are both well pleased with the change.

Since we have started here the citizens have been more than satisfied with our lights, and those of them who have travelled to other cities, where other and different systems of electric lighting are employed, have returned and express the opinion that those in their own town are equal and in many cases superior to those they have seen elsewhere.



The ease and rapidity with which our dynamo throws off its full number of lights and adjusts itself to a smaller number or load, and *vice versa*, with no perceptible change or interruption of the steady current, has always been a source of gratification to us, and cannot fail to commend the same system to others.

I remain, respectfully yours,

LEVI C. LINCOLN, Treasurer.

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THE GEM CITY ELECTRIC LIGHT COMPANY.

QUINCY, ILL., March 2, 1885.

*Wm. Widlund, Esq., Boston.*

Dear Sir: Replying to your inquiry of the 27th regarding the Thomson-Houston system, will say that it has been in operation here for the past eighteen months, to the entire satisfaction of consumers and interested parties. The plant was started Aug. 30, 1883, with forty-five lights. An addition of 125 lights was made on Jan. 10, 1885. The 125 lights are used for street illumination and are paid for by the city. Am at liberty to state that the original forty-five lights were run at a net profit of *more than ten per cent.* With the recent additions this amount will be much increased. It is unnecessary to speak of the superiority of this light, as that is apparent.

In regard to economy, it has been put in places where other systems have failed to pay running expenses, and has paid a good dividend.

The repairs on the original plant have not amounted to twenty-five dollars per year. If the new plant is as economical in this respect, we can find no fault. This amount does not cover breakage of globes, which is a somewhat larger item, but as near as we can ascertain, no more than with other systems. The system is all that it was represented to be, and was selected after a competitive trial with two other prominent systems.

Yours very truly,

G. W. HART, Supt.

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THE CITIZENS' ELECTRIC LIGHT CO.,

AKRON, OHIO, March 26, 1885.

*Wm. Widlund, care of Matthew Crosby, 92 State Street, Boston, Mass.*

Dear Sir: Your favor of inquiry of the 24th inst., at hand. In reply will say that our plant has been in operation since about the 25th of December last. I could not give you a practical answer so far as economy or expense of running is concerned.

The light produced by the Thomson-Houston system is a very superior light so far as steadiness and brilliancy and also color is concerned. The latter point I consider a very important one.

We have a plant here of 150 full arc lights (2,000 candle-power nominal), and thus far we feel perfectly satisfied. If you were here I could give you some practical information that would be of value to you.

Should be pleased to hear from you again, and would like to know what system you adopt.

Very respectfully.

S. D. STEWART, Sec. and Treas.

CONNECTICUT DISTRICT TELEGRAPH & ELECTRIC CO.,

WATERBURY, CONN., March 25, 1885.

*Wm. Widlund, care Mathew Crosby, 92 State St., Boston, Mass.*

Dear Sir: Yours of the 24th inst. received, and in reply will say that before we accepted the Thomson-Houston system we gave the other systems a thorough ventilation and will say that after looking them over we determined the Thomson-Houston Co.'s system to be the steadiest, most economical, and reliable of them all, and its use here has been a perfect success, and we take great pleasure in recommending its use to your people. They will not only find it gives the most satisfactory light, but will prove the most substantial financially.

Yours truly,

A. M. YOUNG, Secretary.

THE ESSEX ELECTRIC COMPANY.

HAVERHILL, MASS., March 25, 1885.

*Mr. Wm. Widlund, Boston, Mass.*

Dear Sir: In reply to yours of the 24th, inquiring about the Thomson-Houston system would say that I think it the most perfect and economical system in the market. Customers who have used in Boston both the Brush and Weston systems in their stores, claim the Thomson-Houston is far superior to either, and I know from my experience that it is the most economical, owing mostly to the perfect arrangement for regulation. I should advise that you visit the company's factory at Lynn, Mass., and there you can see and have explained all the details, and I think you will have no hesitation in saying with me that the Thomson-Houston system is superior to all others.

Very respectfully yours,

D. W. DUNN, Manager Essex Electric Co.

THE GLOUCESTER ELECTRIC LIGHT CO.

GLOUCESTER, March 24, 1885.

*Mr. Wm. Widlund,*

Dear Sir: Your inquiry of the 23d inst. at hand. Would say that we like the Thomson-Houston Electric Light very much. We have been using the carbon feeding lamps, but do not like them very well, and are

going to exchange them for rod feeding lamps, of which we have a few, and like them very much. They are very simple, and work for hours without hissing or flaming, and would recommend them to any one in want of an electric light plant.

Yours respectfully,

F. A. FISHER, Supt. Gloucester Electric Light Co.

THE LYNN ELECTRIC LIGHTING CO.

LYNN, MASS., Feb. 27, 1885.

*Mr. Widlund,*

Dear Sir: Yours of yesterday is at hand. In answer to your inquiry, I would say that we have every reason to be well satisfied with the Thomson-Houston system of electric lighting, because the light gives our customers complete satisfaction, and the stockholders good profits. We have paid a dividend of *seven per cent. from the start*, which was the spring of 1882, and have a surplus of \$5,000 to \$6,000. I should be pleased to have you call down to Lynn, only half-an-hour's ride, and see our plant, when I can give you any additional particulars you would like to know.

Respectfully yours,

HENRY R. VALPEY, Treas.

Office of THE ST. LOUIS THOMSON-HOUSTON ELECTRIC CO.,  
No. 323 North Third Street,

ST. LOUIS, MARCH 30, 1885.

*Wm. Widlund, care of Matthew Crosby, 92 State St., Boston, Mass.*

Dear Sir: Replying to your favor of the 24th inst., would say that we believe the system of arc lighting controlled by the Thomson-Houston Company, of Boston, to be all that is claimed for it. We have been using it without any serious trouble, and find it very satisfactory. It is undoubtedly the best system of arc lighting now in use.

We have no connection whatever with the parent company.

Very respectfully,

D. R. POWELL, Pres't.

NEW BEDFORD ELECTRIC LIGHT CO.

Office, 16 Fourth St.; Central station, 3 School St.  
NEW BEDFORD, MASS., Feb. 27, 1885.

*Mr. Wm. Widlund,*

Dear Sir: Yours of the 26th duly received. In reply, would say we have run a Thomson-Houston plant here for a year, and are very well satisfied with it, and believe it to be the best light in use, and the most economical for use.

We paid one dividend of three per cent. July 1, 1884, and see no reason why we should not continue to do so.

Yours truly,

J. AUGUSTUS BROWNELL, Treasurer.

Office of LEAVENWORTH COAL COMPANY,

LEAVENWORTH, KANSAS, March 30, 1885.

*Wm. Widlund, Esq.*

Dear Sir: In reply to yours of the 24th inst., would say that we do not believe the Thomson-Houston system of electric arc lighting can be too highly recommended.

Its automatic and self-regulating features, its simplicity, durability, economy, and steadiness of the light, renders it, in our opinion, superior to all other arc-lighting systems in existence.

Respectfully yours,

LEAVENWORTH COAL CO.

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WACHUSETT ELECTRIC LIGHT CO.,

FITCHBURG, MASS., March 28, 1885.

*William Widlund, Boston,*

Dear Sir: Yours of the 24th is at hand, and in reply I will state that we have been using the Thomson-Houston system of arc lighting for the past two years, and we can say that it gives perfect satisfaction, and we think it is the best in use.

Yours respectfully,

GEO. W. PINKHAM, Supt.

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THE SALEM ELECTRIC LIGHTING COMPANY,

SALEM, Feb. 28, 1885.

*Wm. Widlund, Esq.*

Dear Sir: In reply to yours of the 26th would say that this company is using the Thomson-Houston system of lighting with entire satisfaction.

We have for sale three 10-light Weston machines and lamps. Price, \$600 for each machine and 10 lamps.

Yours truly,

H. M. BATCHELDER, Treas.

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LEWISTON & AUBURN ELECTRIC LIGHT CO.

AUBURN, ME., March 28, 1885.

*Matthew Crosby, Esq.*

Dear Sir: Your favor of 23d inst. reached me to-day. In reply can say that we are running 112 Thomson-Houston arc lights, having been in the business eighteen months. We have found the lights very satisfactory to ourselves and our customers.

I believe the Thomson-Houston system to be superior to any other that I have seen, in perfection of light and expense of running.

Very respectfully,

N. I. JORDAN, Treasurer.

HELENA, MONTANA, July 15th, 1885.

H. M. OGDEN, Esq., care of Montana Co., Limited, Marysville, Mt.

Dear Sir: In reply to your request that I would express my opinion in regard to the Thomson-Houston arc system of Electric Lighting, I take great pleasure in expressing my entire satisfaction therewith.

Before seeing it I was very much prepossessed with the Weston, but after several months experience with yours, I am prepared to say that it is the equal of any light in purity, and superior to any in steadiness. When the light in the shop was switched off we did not know it in the office, and *vice versa*.

The Dynamo being self-regulating, it needs no attention, and never had any at my place other than to keep it clean, renew the carbons, and start and stop it. The man who had charge of it knew nothing about it whatever until it was erected and run one day by yourself. Since that time he has run it without instructions from anyone.

I consider that two of your lights are equal to *three of the Brush*, not only as we have them in Helena, but under the most favorable conditions I have ever seen them.

Yours very truly,

B. H. TATEM.

## CITIES

### WHERE THE THOMSON-HOUSTON SYSTEM HAS SUPERSEDED OTHERS.

Among the many cities throughout the United States which have discarded other systems, even after the apparatus had been paid for, and adopted the Thomson-Houston, may be mentioned the following: —

Davenport, Ia., Salem, Mass., New Haven, Conn., Portland, Me., Lowell, Mass., Providence, R. I., Springfield, Mass., Duluth, Minn., Newport, R. I., and others. In connection with the latter city, the following letter from Mr. W. B. Hosmer, a director in the Newport Illuminating Company, and also one from the president of the New Haven Electric Company will be of interest, repeating as they do the experience of all the cities above mentioned.

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PERRY HOUSE, NEWPORT, April 11, 1885.

*Mr. W. W. Munroe, Boston, Mass.*

Dear Sir: In reply to your inquiry addressed to the Newport Illuminating Co., of which I am a director, in reference to the history of the recent change of electric light systems in Newport, I will endeavor to give you a few of the facts.

The United States or Weston system had been in use for some time for street lighting, the city having contracted for fifty-eight lights. The contract expired Jan. 1, 1885, and so much dissatisfaction was felt with the system that an order passed the council ordering the lamp committee to contract with the Gas Company for the ensuing year to light the streets in place of the electric lights.

A few days later the lamp committee met to execute the instructions of the council, and were confronted with a remonstrance signed by the best citizens of Newport, who believed that a satisfactory system of electric lighting could be obtained. The matter was referred back to the council, and after much discussion, the Lamp Committee were instructed to make the fullest investigation possible, of different systems. Some weeks were occupied in accomplishing this work, and finally a full report was presented by the committee, accompanied by a unanimous recommendation that the city adopt the Thomson-Houston system of electric



lighting, and a large increase be made in the number of street lights. The committee stated that they were fully satisfied the Thomson-Houston system was superior to any other in use.

The Newport Illuminating Company was incorporated to operate this system in Newport, and received the contract with the city for an increase above the number of lights previously used. We started the entire number of lights this week and can only say that they meet on every side the most hearty approval, and fully realize all the good things that were said of them. We anticipate a still further increase in the number of lights within six months.

Very truly yours,

W. B. HOSMER.

THE NEW HAVEN ELECTRIC COMPANY, No. 88 TEMPLE ST.  
NEW HAVEN, CONN., March 27, 1885.

*The Thomson-Houston Electric Co., Boston, Mass.*

Gentlemen: In reply to your favor of the 26th would say that after something more than a year's trial of your system, we find it all that you ever claimed for it, certainly far more than we ever expected.

Prior to adopting your system we had a most trying and unfortunate experience in electric lighting. After operating the United States or Weston dynamos and lamps for some eighteen months, under the most favorable circumstances, we found ourselves heavily in debt, and losing money steadily.

We can frankly say that we did not believe it possible to do a profitable business with any system at the time we installed yours, but did believe it was the best system then in use.

It gives us pleasure now to state that the year's business has been most gratifying. Our rentals for lamps have been the same as before the change of systems, yet the economy of operating and maintaining your apparatus is such that what was a losing business before, has been changed into a most profitable one, and our company has a net profit of fully sixteen per cent. upon its capital stock.

We have had such a complete demonstration of the great commercial value of your system, that we do not hesitate to say that a local company operating it will earn a handsome profit under the same circumstances that with other systems would result in a loss.

More than this it is needless to say concerning it.

Very truly yours,

F. A. GILBERT, Pres. New Haven Electric Co.

The New Haven Company further report that they are now accomplishing for \$7 per day attendance what formerly cost them \$21 per day, when using the United States or Weston system.

[FROM NEWPORT DAILY NEWS, Feb. 23, 1885.]

*To the Editor of the Daily News.*

In an article of your issue of the 17th instant, on the Electric Light controversy, the writer referred to the Weston lights in Lowell, Massachusetts, as still in use, although the Thomson-Houston system had been introduced there. I wrote the general manager of the Lowell company for information on the subject, and hand you herewith his reply.

Respectfully,

W. B. Hosmer.

BOSTON, Feb. 23, 1885.

*W. B. Hosmer, Esq., Boston, Mass.*

Dear Sir: Your letter of the 19th instant at hand inquiring in regard to the merits of the Thomson-Houston and Weston system of electric lights. In reply would say our experience, after running both systems for two years, has taught us that no company can afford to use the Weston system, as it would bankrupt them to keep them in repair and running. And again, run them the best you can, you cannot give your customers a decent light or a light they will be satisfied to pay for. On the other hand the Thomson-Houston system can be run at comparatively no expense for repairs, and yet you get a perfectly white, steady light without any hissing—a light that pleases everybody. I never have taken out a Thomson-Houston light on account of it not giving satisfaction, while we have been obliged to take out every Weston light we had in stores (about sixty in all), and replace them with Thomson-Houston, and as a last resort we put the Westons on the streets because we did not have Thomson-Houston lamps enough to fill our orders and could not afford to buy more while we had eight Weston dynamos on hand. We have been trying to sell them for over a year, but could not get an offer. As soon as we put the Weston lights on the street, the Superintendent of street-lights and the public generally, began to find fault with them, and there has been so much fault found, and they are such a poor light, so unreliable and so expensive to run, that, at a meeting of the executive committee of this company held yesterday, it was decided to discontinue running them altogether, and a meeting of the directors is called for February 24th to authorize the executive committee to purchase Thomson-Houston dynamos and lamps to replace them. We are ready to sell the eight dynamos and eighty lamps at fifty per cent. off list price, and take our pay in Thomson-Houston dynamos at list price. If you wish more information, I would refer you to the Superintendent of street-lights and to our leading merchants who have used and are now using the Thomson-Houston. I will send you a list of them, if you wish it.

Respectfully,

J. Y. BRADBURY, General Manager.



## ELECTRICITY vs. GAS.

### THE FORMER AN ALLY RATHER THAN COMPETITOR OF THE LATTER.

Within the past few months, the gas companies have been gradually awakening to the fact that, so far from being a competitor, electric lighting, if properly introduced and managed, may prove a valuable ally to their business, inasmuch as it very naturally creates a demand for more brilliant illumination generally.

It is a peculiar but nevertheless well-established fact, that in all large cities where electric lights have been successfully introduced, and established upon a paying basis, there the gas companies are carrying on a more prosperous business than ever before in the history of their organization. This belief has become so thoroughly impressed upon the minds of the officers in several large gas companies, that they have purchased Thomson-Houston apparatus, which they are now using very successfully in connection with their gas. A few letters of recent date from several of these companies we publish below, and we would here take the opportunity of inviting officers of gas companies and capitalists interested therein, to correspond with us with a view to testing the success of furnishing arc lights in connection with gas.

The day for unreasonable prejudice is past, and now, in consideration of the high perfection attained by the Thomson-Houston system, in all prominent cities where a demand for electric lights exists or can be created, the local gas companies should be the very first to take steps toward securing the field and furnishing the lights to such of their patrons as may desire them.

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Office of the MUSCATINE GAS LIGHT AND COKE CO.  
MUSCATINE, IOWA, April 2, 1885.

*The Thomson-Houston Electric Co.*

Gentlemen: In reply to your letter of March 30, would say that since the introduction of the electric light in our city, we find that the consumption of gas has increased about *ten per cent. or more.*

The conviction is daily growing upon us that the electric arc light, so far from being a detriment to the use of gas, has increased it without a doubt.

We feel pleased with our investment, and would recommend all gas companies to adopt its use, believing that they will find the investment a profitable one.

Yours very truly,

T. COWELL, Sec. and Treas. Muscatine Gas Co.

[COPY.]

OFFICE OF UTICA GAS LIGHT CO., 23 Whitesboro' St.

UTICA, NEW YORK, July 16, 1885.

J. D. HIGGINS, Esq., Sup't Rome Gas Light Co., Rome, N. Y.

Dear Sir:—We are answering many inquiries like your own, as to the effect of electric arc lighting upon our gas lighting interests. We have been experimenting two years with a limited plant used principally for street and out door lighting for which it seems generally well adapted. Our experience and observation leaves us in no doubt that the introduction of electric arc lighting here has increased our sale of gas.

Truly yours,

H. H. FISH, Treas.

[COPY.]

DAVENPORT GAS LIGHT COMPANY,

DAVENPORT, IOWA, JULY 21, 1885.

S. A. BARTON, Esq., Gen'l Manager Thomson-Houston Electric Co.

Dear Sir:—It will doubtless interest you to learn some particulars of our experiment in the use of your system of electric illumination in connection with gas lighting.

We have now operated two of your 25-light machines for somewhat over one year.

We are lighting the city itself with gas, under contract.

In this union of electricity with gas, our company was the pioneer, and despite the warnings and forebodings of our associates, the experiment has turned out an entire success.

Your lights have not only given our customers entire satisfaction, but many of them are almost enthusiastic in their expression of approbation.

We have found your system safe, easy, and economical in operating, and it is difficult to see wherein it can be improved.

There is one result of our experiment with electricity, which should commend itself to gas companies generally, and that is its tendency to increase the consumption of gas. This is easily explained by the fact that it educates the eye up to a higher standard of illumination.

Customers not using the electric light endeavor to vie with its greater brilliancy by burning gas at full head, and this increases their consumption.

Thus among our large consumers, we have a capacious and popular hotel. The proprietor, over a year since, displaced gas in the office and corridors with electricity, using five of your arc lights. The curious and important result is, that his consumption of gas in the remainder of his house is larger than his entire consumption before adopting the electric light.

I must not omit to mention that while our adoption of electricity as part of our system of illumination has not decreased our gas profits, there is a fair prospect that the experiment itself will turn out remunerative.

If the system continues to work in the future as in the past, we shall easily be able to make as large, if not larger, dividends upon our electric light, as upon our gas plant.

Very truly yours,

CHAS. E. PUTMAN, Prest.

The following gas companies have purchased Thomson-Houston Electric Light apparatus and are running the same very successfully in connection with their gas works.

| NAME OF COMPANY.                  | LOCATION.         | NO. OF LIGHTS. |
|-----------------------------------|-------------------|----------------|
| The Muscatine Gas Light Co.,      | Muscatine, Iowa.  | 27             |
| Davenport Gas Light and Coke Co., | Davenport, "      | 50             |
| Twin City Gas Light Co.,          | La Salle, Ill.    | 50             |
| Freeport Gas Light and Coke Co.,  | Freeport, "       | 60             |
| Oakland Gas Light and Coke Co.,   | Oakland, Cal.     | 75             |
| Ashland Gas Light Co.,            | Ashland, Penn.    | 25             |
| Leavenworth Coal Co.,             | Leavenworth, Kan. | 102            |

## LOCAL COMPANIES, OPERATING THE THOMSON-HOUSTON SYSTEM.

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We publish below a list of the local illuminating companies which have adopted and are now using the Thomson-Houston system. This list is constantly being added to, and at the time of going to press a number of other companies are about being organized, and will soon be in active operation.

| NAME OF COMPANY,                            | LOCATION.                            | NO OF<br>LIGHTS. |
|---------------------------------------------|--------------------------------------|------------------|
| Consolidated Electric Light Co.,            | { Portland and Old<br>Orchard, Me. } | 200              |
| Lewiston and Auburn Electric Light Co.,     | Lewiston, Me.                        | 150              |
| Bar Harbor Electric Light Co.,              | Bar Harbor, "                        | 100              |
| Merchants' Electric Light and Power Co.,    | Boston, Mass.                        | 498              |
| Union Electric Light Co.,                   | East Boston, "                       | 100              |
| Lynn Electric Lighting Co.,                 | Lynn, "                              | 165              |
| Salem Electric Lighting Co.,                | Salem, "                             | 175              |
| Worcester Electric Lighting Co.,            | Worcester, "                         | 200              |
| Middlesex Electric Lighting Co.,            | Lowell, "                            | 250              |
| Wachusett Electric Lighting Co.,            | Fitchburg, "                         | 139              |
| New Bedford Electric Lighting Co.,          | New Bedford, "                       | 119              |
| Fall River Electric Light Co.,              | Fall River, "                        | 131              |
| Essex Electric Light Co.,                   | Haverhill, "                         | 87               |
| Gloucester Electric Light Co.,              | Gloucester, "                        | 56               |
| Springfield Electric Light Co.,             | Springfield, "                       | 106              |
| The Jenny Electric Light Co.,               | Brookton, "                          | 60               |
| North Adams Electric Light and Power Co.,   | North Adams, "                       | 38               |
| Cottage City Electric Light Co.,            | Cottage City, "                      | 50               |
| Woonsocket Electric Machine & Power Co.,    | Woonsocket, R. I.                    | 28               |
| Narragansett Electric Light Co.,            | Providence, "                        | 470              |
| Pawtucket Electric Light Co.,               | Pawtucket, "                         | 50               |
| Newport Electric Illuminating Co.,          | Newport, "                           | 75               |
| Hartford Electric Light Co.,                | Hartford, Conn.                      | 300              |
| New Haven Electric Light Co.,               | New Haven, "                         | 162              |
| Bridgeport Electric Light Co.,              | Bridgeport, "                        | 241              |
| Norwich Electric Light Co.,                 | Norwich, "                           | 76               |
| Conn. District Telephone and Telegraph Co., | Waterbury, "                         | 80               |
| Syracuse Electric Light and Power Co.,      | Syracuse, N. Y.                      | 266              |
| Central N. Y. Electric Light and Power Co., | Utica, "                             | 53               |
| Auburn Electric Light Co.,                  | Auburn, "                            | 103              |
| Citizens' Electric Illuminating Co.,        | Brooklyn, "                          | 137              |
| Elmira Electric Light Co.,                  | Elmira, "                            | 28               |
| Municipal Electric Light Co.,               | Brooklyn, "                          | 125              |
| Bethlehem Electric Light Co.,               | Bethlehem, Pa.                       | 121              |

| NAME OF COMPANY.                              | LOCATION.             | NO. OF LIGHTS. |
|-----------------------------------------------|-----------------------|----------------|
| McKeeseport Electric Light Co.,               | McKeeseport, Pa.      | 50             |
| Germantown Electric Light Co.,                | Germantown, "         | 50             |
| Champion Electric Light Co.,                  | Springfield, Ohio,    | 80             |
| Columbus Electric Light and Power Co.,        | Columbus, "           | 155            |
| Chillecothe Electric Light Co.,               | Chillecothe, "        | 9              |
| Citizens' Electric Light Co.,                 | Akron, "              | 141            |
| Cleveland Electric Light Co.,                 | Cleveland, "          | 180            |
| Gem City Electric Light Co.,                  | Quincy, Ill.          | 183            |
| East St. Louis Electric Light Co.,            | E. St. Louis, "       | 100            |
| The Thomas Electric Light Co.,                | Ottawa, "             | 85             |
| Pontiac Electric Light Co.,                   | Pontiac, "            | 25             |
| Streator Electric Light Co.,                  | Streator, "           | 25             |
| Mendota Electric Light Co.,                   | Mendota, "            | 26             |
| Citizens' Electric Light Co.,                 | Des Moines, Iowa.     | 50             |
| Pilcher Improved Electric Light Co.,          | Conneil Bluffs, Iowa. | 75             |
| St. Louis Thomson-Houston Electric Light Co., | St. Louis, Mo.        | 200            |
| St. Joseph Electric Light Co.,                | St. Joseph, "         | 95             |
| Kawsmouth Electric Light Co.,                 | Kansas City, "        | 227            |
| Oshkosh Electric Light Co.,                   | Oshkosh, Wis.         | 60             |
| Janesville Electric Light Co.,                | Janesville, "         | 50             |
| Badger Electric Light Co.,                    | Racine, "             | 100            |
| Leavenworth Coal Co.,                         | Leavenworth, Kan.     | 102            |
| Western Construction Co.,                     | Atchison, "           | 75             |
| Duluth Electric Light Co.,                    | Duluth, Minn.         | 75             |
| Excelsior Electric Light Co.,                 | Port Huron, Mich.     | 60             |
| Terre Haute Electric Light Co.,               | Terre Haute, Ind.     | 105            |
| Atlanta Electric Light Co.,                   | Atlanta, Georgia.     | 45             |
| Electric Light and Power Co. of Mobile,       | Mobile, Ala.          | 50             |
| Pacific Thomson-Houston Electric Light Co.,   | Sacramento, Cal.      | 212            |
| Jacksonville Electric Light Co.,              | Jacksonville, Fla.    | 60             |
| Poughkeepsie Electric Light Co.,              | Poughkeepsie, N. Y.   | 79             |
| Omaha Electric Light Co.,                     | Omaha, Neb.           | 120            |
| Long Branch Electric Light Co.,               | Long Branch, N. J.    | 90             |
| Plainfield Electric Light Co.,                | Plainfield, N. J.     | 50             |
| Brookline Electric Illuminating Co.,          | Brookline, Mass.      | 90             |
| York Electric Light Co.,                      | York, Pa.             | 180            |
| Asbury Park Electric Light Co.,               | Asbury Park, N. J.    | 50             |
| Bangor Electric Illuminating Co.,             | Bangor, Me.           | 114            |
| Camden Electric Light Co.,                    | Camden, N. J.         | 100            |
| Auburn Electric Light Co.,                    | Auburn, Me.           | 25             |
| Keokuk Electric Light Co.,                    | Keokuk, Iowa.         | 60             |
| Crawfordsville Electric Light Co.,            | Crawfordsville, Ind.  | 45             |
| Rockaway Beach Illuminating Co.,              | Rockaway Beach, L. I. | 45             |
| Jacksonville Electric Light Co.,              | Jacksonville, Ill.    | 36             |

## FOREIGN COMPANIES.

| NAME OF COMPANY.                             | LOCATION.         | NO. OF LIGHTS. |
|----------------------------------------------|-------------------|----------------|
| Ottawa,                                      | Ontario.          | 200            |
| St. Catharine's,                             | "                 | 100            |
| Peterborough,                                | "                 | 125            |
| Hamilton,                                    | "                 | 150            |
| Montreal,                                    | Quebec.           | 350            |
| Quebec,                                      | "                 | 200            |
| Halifax,                                     | Nova Scotia.      | 100            |
| St. Johns,                                   | New Brunswick.    | 100            |
| St. John,                                    | Newfoundland.     | 90             |
| Rio de Janeiro, (In course of construction.) | Brazil.           |                |
| Para, " "                                    | "                 |                |
| Lima, " "                                    | Peru.             | 100            |
| Callao, " "                                  | "                 |                |
| Guayaquil, " "                               | Ecuador.          | 50             |
| Guatemala Electric Light Co.,                | Guatemala, C. A.  | 300            |
|                                              | Mazatlan, Mexico. |                |

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CARLTON HOUSE, CAPE MAY POINT, N. J., Aug. 2, 1882.

*Thomson-Houston Electric Light Co.*

Gentlemen:—We have now had your Thomson-Houston Electric Light in operation one month, and I can, without hesitation, say that it gives us entire satisfaction. We think it as near perfect as it is possible to get a light, and it is the admiration of all who see it.

Yours truly,

A. H. HAMILTON.

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FARIST STEEL CO.,  
BRIDGEPORT, CONN.

*The Thomson-Houston Electric Co.:*

Gentlemen: In reply to yours of the 5th, inquiring something of my experience while serving on the Committee of gentlemen of this city appointed to investigate and report on the best Electric Light, I will say that after seeing the United States, the Weston, the Brush, and the Thomson-Houston Electric Lights in operation, we decided that the Thomson-Houston Light was far the best, for the following reasons:—

*First*—The steadiness of the light.



*Second* — The soft or easy light to the eye, while retaining the power and brilliancy of any light seen. We believe, so far as our experience goes, that it is the most economical system to run that is now used.

We are at this time putting up a new plant of your system in competition with the Brush Co.'s system, and we expect soon to have the city lighting.

Respectfully yours,

JOEL FARIST.

[Since the above was written, the city lighting in Bridgeport has been awarded to the Bridgeport Electric Light Co., using the Thomson-Houston system.]

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BANNER TOBACCO WORKS,

RICHMOND, VA., July 26th, 1884.

Dear Sir: Replying to your inquiry as to how we have been pleased with the Electric Light, known as the "Thomson-Houston System" with which you supplied us, it gives us pleasure to state that we have found it in every way all that you claimed for it. The light given is bright and clear, and free from that flickering which renders the most lights of the kind unsatisfactory. Under this light the color of the wrappers is brought out as clear as in daylight, enabling us to work without intermission during cloudy weather or at night. Again, this light throws out but little heat. Our works are consequently much cooler and more comfortable than when gas is used, the volume of light being at the same time immensely greater. Besides the cost of the machine and expense of putting it in, we have been at no expense in running it, save for the "Carbon Points," which we have found not to exceed fifty cents a night for the ten lamps in operation. We have of course furnished our own power, but this we have found to be scarcely noticeable, as we but use the steam necessary for the proper working of our establishment. We would most cordially recommend your system to any one desirous of using "Electric Light."

We remain yours truly,

LAWRENCE LOTTIER.

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THE LYNN ELECTRIC LIGHTING CO.

LYNN, MASS., Sept. 9, 1882.

*The Thomson-Houston Electric Co.*

Gentlemen: You ask me what I can say of your system. In reply will say, I cannot speak too highly of it. I regard it as the most practical, most economical, and the easiest system to run now in use. The value of the Automatic Regulator cannot be over-estimated. That and the Air-Blast Attachment are almost indispensable to the perfect and economical working of a system of arc lighting. Owing to the frequent closing of

the stores in this city during the summer months, we should have been compelled to run our business at a loss this season, had it not been for the Automatic Regulator, which admits of a corresponding diminution of motive power as we diminish the number of lamps in actual use. And to give you my opinion of the Air-Blast, perhaps I can do it in no better way than to state that I find it impossible to flash the 26-lighter which has it on, and the saving in brushes and wear on commutators is considerable. Although the machine has been running nearly three months *we have not found it necessary to trim the brushes*, and the wear on the commutator is not noticeable. In conclusion, the merits of the system cannot be set forth too highly; suffice it to say we could not be induced to exchange for any other system now in use.

Yours very truly,

HENRY R. VALPEY, Manager Lynn Electric Lighting Co.

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OFFICE OF THE HARTFORD SILK M'F'G CO.

TARIFFVILLE, CONN., June 28, 1883.

*The Thomson-Houston Electric Co., 131 Devonshire St., Boston, Mass.*

Gentlemen: We have had in use for the past year three of your ten-light machines, and have to say that we are much pleased with the working of the same, and are well satisfied that we get a better light and at a very much less expense than can be had by any other system of lighting. Expense of repairs has been nothing, and the cost of keeping the light in order very small in proportion to results obtained.

Yours truly,

E. A. FREEMAN, Treas.

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OFFICE OF JOHNSON M'F'G CO.,

Manufacturers of Gingham.

NORTH ADAMS, MASS., July 11, 1883.

*Messrs. Thomson-Houston Electric Light Co., Boston, Mass.*

Gentlemen: Your favor of the 10th inst. received. The Electric Lighting apparatus, put by you into our works, runs to our entire satisfaction. We have had one or two other makes here on trial, but for our purpose your machine is the best of them all. We are pleased to be able to recommend the machine.

Yours very truly,

JOHNSON M'F'G CO., R. H. SYKES.

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PITTSBURGH, PA., July 10, 1882.

*The Thomson-Houston Electric Light Co., Philadelphia, Pa.*

Gentlemen: We have used, during the past winter, sixteen lights and one Dynamo-Electric Machine, of your make, and are pleased to state that so far we are perfectly satisfied with the same.

Yours respectfully,

KEYSTONE BRIDGE CO., A. GOTTLIEB, Pres.

FROM THE KAWSMOUTH ELECTRIC LIGHT CO.


KANSAS CITY, NOV. 22, 1882.

*S. A. Barton, Esq., Gen. Manager Thomson-Houston Electric Co., Boston.*

Dear Sir: Our company have been using for several months the Thomson-Houston system of electric lighting, and supplying satisfactory lights to our customers. We have one hundred and ten lights now in use, and will soon add to the number to meet the increasing demand for them. I regard the lights furnished as exceeding in quality, brilliancy, and steadiness, any others that I have seen; and I believe the system to be the most economical, most practical, and the easiest to run of any system in use. Your system was adopted after an investigation of other systems, and I have no reason to regret our choice. The business is highly satisfactory.

Yours truly,

WM. HOLMES, Pres't Kawsmouth Electric Light Co.

 Since the receipt of the above letter the Kawsmouth Co. have taken four additional 25-light dynamos.

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NEW BRITAIN, CONN., Jan. 11, 1882.

*To whom it may concern:—*

We can heartily recommend the Thomson-Houston Electric Light, having used it in our store. It brings out the colors of all classes of goods, and lights our store as thoroughly and satisfactorily as daylight.

Any one once using the lights will find it very hard to come down to gas.

Respectfully,

F. H. ALLIS & Co., Clothiers, Furnishers, and Hatters.

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CONTINENTAL BREWERY,

PHILADELPHIA, July 10, 1882.

*Thomson-Houston Electric Light Co.*

Gentlemen: In reply to yours of the 8th inst., inquiring as to our opinion of your Electric Lighting apparatus, we reply that during the time we have used it, since October, 1879, our appreciation of it has steadily increased. Our whole establishment is now lighted almost exclusively by it, and it has given us such satisfaction that upon the completion of contemplated improvements, whereby our brewery will be greatly enlarged, we shall undoubtedly call upon you to furnish us with more apparatus.

Very truly yours,

JOHN GARDINER & Co.

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EDGE MOOR, July 29, 1882.

*Thomson-Houston Electric Light Co., Philadelphia.*

Gentlemen: We have had one of your 16-light machines running at these works since April, 1881, and added a second one in January of the present year, both of which have given us entire satisfaction. We are

Yours truly,

EDGE MOOR IRON CO.

BALDWIN LOCOMOTIVE WORKS,  
PHILADELPHIA, July 26, 1882.

*The Thomson-Houston Electric Light Co., City.*

Gentlemen: We have had in use in our erecting shop since October last your system of arc lights. One of your 18-light Dynamo Machines is employed, and is driven by a special engine which is used expressly for driving three dynamo-machines of three different systems of electric light. The light has given us good satisfaction and answered our purpose well. We have found no difficulty in keeping it in order and obtaining from it constant service. We have run most of the time twenty and twenty-one lights on the Dynamo, although you have frequently reminded us that eighteen good lights was the capacity of the machine, and that with a larger number we could not expect such good results.

In the latter part of our experience with the lights during last spring we found an improvement in respect to their steadiness.

We have not kept our accounts in such a way as to show the cost of running the light any further than the indicator cards taken from our engine have shown the consumption of H. P. of 15 4-10, including friction, for twenty of your lights. This result as to H. P. was not surpassed in the same test by any of the other systems which we have in use.

Very truly yours,

BURNHAM, PARRY, WILLIAMS, & Co.,  
WOOLLEN.

PHILADELPHIA, 15th, 7 mo., 1882.

*To the Thomson-Houston Electric Light Co., Philadelphia.*

We have had in use for over a year one of your 12-light machines with excellent results, and now think we would be unable to conduct business at our factory with only our former lighting by headlight oil in lamps and lanterns. We do not hesitate to recommend your apparatus as reliable and economical. When we purchased it we gave it the *preference* over that of your competitors after a thorough acquaintance with all in the market.

Respectfully,

JOHN M. SHARPLESS & Co.,  
Philadelphia and Chester, Pa.

DELAWARE ROLLING MILLS,  
PHILADELPHIA, July 10, 1882.

*The Thomson-Houston Electric Light Co., City.*

Gentlemen: We have had one of your 6-light Electric Machines in use in our works since February, 1881. It has given us entire satisfaction.

Yours respectfully,

HUGHES & PATTERSON.

SPRING FORGE, PA., 17th, 7 mo., 1882.

*Messrs. Thomson-Houston Electric Light Co.*

Gentlemen: I have been using your Electric Machine for nine months and it has always given entire satisfaction. I can cheerfully recommend it to parties who are in want of an Electric Light. I remain,

Yours respectfully,

P. H. GLATFELTER, per W.

The following is a copy of a letter lately received by Carroll & Powell, St. Louis, from the Captain of one of their steamboats on the Mississippi River, the light being the Thomson-Houston:—

*Messrs. Carroll & Powell.*

Your letter of Oct. 23d to hand and noted. I should have complied ere this but was waiting to see the result of your light.

The Electric Light has been completed and has ever since given *entire satisfaction*, and can undoubtedly say it is the *best light* I ever saw, and other steamboat men recommend the same, and I can recommend it as being a No. 1 light.

(Signed)

D. A. CUBBERLY.

SALEM, MASS., Feb. 17, 1885.

To W. B. HOSMER, Esq.

Dear Sir: Yours of Feb. 16th in regard to electric lighting came duly to hand.

I would hardly like to prejudice any one against the Weston system, but will merely state the facts. We were running five ten-light Weston machines for perhaps one year and a half. We had so much trouble with them that we tried one twenty-five light Thomson-Houston machine as an experiment, and the result has been that we have taken out all of the Weston and are running about eighty of the Thomson-Houston with excellent success.

I think it fair to state that the Weston is a good light, but needs great care in running, while the Thomson-Houston require very little care, comparatively.

Do you know of any one that wishes to buy four Weston machines? We paid seventeen hundred dollars each. Would sell for six hundred each, with lamps.

Hoping this will prove satisfactory, I am, with respect,

Yours, etc.,

I. P. HARRIS.

Director in SALEM E. L. Co.

[FROM THE SACRAMENTO (CAL.) SUNDAY CAPITAL, MARCH 30, 1884.]

The Electric Light Companies had their lamps lighted last evening and the city presented a fine appearance, and nothing was talked of but Electric Lights. The two systems used are the Brush and the Thomson-Houston, and it is very plain to be seen that the *latter takes the lead in most every respect*, and it was so decided by everybody we talked with on the subject.

Mr. S. H. Taylor, who came from the East to assist Messrs. Waterhouse and Coleman in getting the Thomson-Houston light in operation, stated to a CAPITAL reporter that it did not astonish him that their system had taken the lead, for it was the case in every place where it had come in competition with others; and we do not doubt it, for it certainly is by far the finest system we have ever seen.

At a private exhibition of the Thomson-Houston light on last Friday evening, when were present Gov. Stoneman, Secretary of State Thompson, Mayor Brown, the Directors of the Brush Company, and many prominent citizens, we were shown the merits of this light. We never supposed the electric light could reach such a perfection as is combined in this system. Among the most important features are:—

The lights are entirely free from the hissing noise which is so disagreeable in other systems.

They burn perfectly steady, and consequently make a pleasant light both for in-doors or out.

So perfect is the action of the machinery that in a circuit of twenty-five to thirty lights, lights may be removed or put out in rapid succession without affecting those that remain.

Each subscriber can have perfect control of his lamp, as it can be turned off or lighted at will.

The above are only a few of the merits that were shown us, but they are a sufficient guarantee that it has no equal on this coast.

We predict for the Thomson-Houston a grand rush, and doubt if the Pacific-Electric Light and Motor Company will be able to supply the immediate demand.

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[FROM THE IOWA STATE REGISTER, AUG. 8, 1883.]

The New Electric Light Company in Des Moines has produced a genuine sensation by the great excellence of its light, and by the steadiness and softness of the blaze. Every one who is acquainted with electric lighting, and who has seen the lights of this new company for the past two or three nights, pronounces it the best, steadiest, most illuminating and pleasant electric light they have ever seen. It is the Thomson-Houston patent, which is now fast superseding all other lights in New York and New England. It is soft and pleasant to the sight, burns without a flicker, and with none of the unpleasant hissing sound so inseparable from other lights. All who have seen these new lights are delighted with them, and orders are being made for them by business men beyond the present capacity of the company to furnish.



## ISOLATED LIGHTING.

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Among the many isolated plants installed in mills, factories, and other industrial establishments throughout the United States by the Thomson-Houston Company, may be mentioned the following:—

|                                 |                         |
|---------------------------------|-------------------------|
| Penobscot Chemical Fibre Co.,   | West Great Works, Me.   |
| Wentworth Hotel,                | Newcastle, N. H.        |
| Barnaby Manufacturing Co.,      | Fall River, Mass.       |
| Johnson Manufacturing Co.,      | North Adams, "          |
| Carson & Brown,                 | Dalton, "               |
| Carew Manufacturing Co.,        | South Hadley, "         |
| Geo. H. Gilbert Mfg. Co.,       | Ware, "                 |
| T. J. M. Smith & Co.,           | Boston, "               |
| Chas. Parker Co.,               | Meriden, Conn.          |
| Russell & Erwin Manuf'g Co.,    | New Britain, "          |
| Stanley Tack Co.                | New Britain, "          |
| P. & F. Corbin,                 | New Britain, "          |
| Windsor Locks Steel Co.,        | Windsor Locks, "        |
| Waterbury Brass Co.,            | Waterbury, "            |
| Farist Steel Co.,               | Bridgeport, "           |
| Hartford Silk Mfg. Co.,         | Tariffville, "          |
| New Haven Wire Co.,             | New Haven, "            |
| Riggs House,                    | Washington, D. C.       |
| Russell & Morgan Printing Co.,  | Cincinnati, Ohio.       |
| Litchfield Car and Machine Co.  | Litchfield, Ill.        |
| National Hotel,                 | Peoria, "               |
| Matteson House,                 | Chicago, "              |
| Rush Street Bridge,             | Chicago, "              |
| A. L. Ide,                      | Springfield, "          |
| Globe Woolen Mills,             | Utica, N. Y.            |
| Buffalo Electrical Works,       | Buffalo, "              |
| Bamber Tobacco Works,           | Richmond, Va.           |
| Jacksonville Hotel Co.,         | Jacksonville, Fla.      |
| Chaffee Bros.,                  | Etiwanda, Cal.          |
| Steamer "Chas. Merriam"         | Mississippi River, Ky.  |
| Steamer "Minnetonka"            | Mississippi River, "    |
| Steamer "Chas. Morgan,"         | Mississippi River, "    |
| Wm. Angus,                      | Montreal, Canada.       |
| J. R. Booth & Co.,              | Ottawa, "               |
| Midvale Steel Works,            | Nicetown, Philadelphia. |
| Pemecoyd Iron Works,            | near Philadelphia, Pa.  |
| Baldwin Locomotive Works,       | Philadelphia, "         |
| Delaware Rolling Mills,         | Philadelphia, "         |
| W. C. Allison & Sons' Car Shop, | Philadelphia, "         |





